

ORBICULA CUVIER, 1798 (BRACHIOPODA): PROPOSED
SUPPRESSION. Z.N.(S.)2545

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This case involves the inarticulate brachiopod genus *Orbicula* Cuvier, 1798 (p. 435) with its only named (and thus type) species, *Patella anomala* Müller, 1776 (p. 237). *P. anomala* is a well understood living North Atlantic brachiopod belonging to the family CRANIIDAE, whereas the name *Orbicula* has been surrounded by confusion from its inception and for most of its history has been applied to a genus in a different superfamily of brachiopods, the DISCINACEA. There are fundamental differences in their shell fabrics. The name *Orbicula* has been used almost entirely in synonymy for over a hundred years. We wish to separate a group of craniid brachiopods as a genus distinct from known genera and based upon *P. anomala*. However, to reintroduce the name *Orbicula* would cause great confusion to palaeontologists and zoologists studying brachiopods, and we seek the suppression of that name in order to clear the ground for establishing a new generic name within the CRANIIDAE (Lee & Brunton, in press).

2. Müller first briefly described *Patella anomala* in 1776 (p. 237); in 1788 (p. 4 & pl. 5) he redescribed the species in detail and provided good (for his day) and identifiable illustrations. In describing the shell he wrote that the exterior [of the dorsal valve] was rough and dark brown in colour; his coloured illustrations (pl. 5, figs 1 & 2) show this, which is the proteinaceous periostracum. He continued by writing that the interior of the valve was white to blueish and strongly endopunctate. This colour indicates that the shell was calcareous, as in all craniids.

3. Cuvier (1798, p. 435) introduced the name *Orbicula* with a brief and very general description of the dorsal valve. He named only *P. anomala* Müller within *Orbicula*, but included no figures.

4. Illustrations attributed to Cuvier appeared for the first time after his death in 1832, in the third edition of the '*Règne Animal* (1845, pp. 250–251, pl. 134), in which *P. anomala* and *Anomia turbinata* Poli, 1795 were included in *Orbicula*, and a clearly named species *Orbicula lamellosa* (Broderip, 1833), which is now the type species of the discinid genus *Discinisca* Dall, 1871, was illustrated. Discinids have brown chitino-phosphatic shells, lacking endopunctuation; they are never calcareous.

5. The confusion between chitino-phosphatic discinids and the calcareous shelled craniids arose when, according to Dall (1871, p. 40), some specimens sent by J. Sowerby to Lamarck were described by the latter as *Discina ostreoides* in 1819 (p. 237). In 1822 (p. 468) G. B. Sowerby published descriptions of other conspecific examples from the same

collection as *Orbicula norvegica*, thus associating the name *Orbicula* with discinids. Because of this and also possibly because of the ambiguity of Cuvier's original description of *Orbicula*, all major brachiopod workers until the mid-1860s used the name *Orbicula* solely for pedically attached chitino-phosphatic discinids. Of about twenty papers published from 1822 to 1862 the currently held view was clearly stated by Chenu (1862, pp. 230–231) when he included *Crania anomala* amongst his species illustrating *Crania* Retzius, 1781, and used '*Orbicula* Cuvier, 1798' as the diagnostic genus for a new separate family.

6. Early 19th century authors such as Gray (1825, p. 243) recognised that *P. anomala* Müller was closely related to *Crania craniolaris* (Linnaeus, 1758), the type species of *Crania* Retzius, 1781, and thus made *Orbicula* a junior synonym of *Crania*. The combination *Orbicula anomala* (Müller) has not been used in any formal systematic description, but only in synonymy listings.

7. Sherborn (1932, p. 764) listed 68 named species in the genus *Orbicula* published between 1800 and 1850. Of these, at the most, four should be assigned to the craniids, while the rest are fossil or living chitino-phosphatic discinids, now placed in the Discinacea.

8. This long-standing use of the name *Orbicula* for discinids declined after 1853 when Davidson (p. 128) pointed out that 'as the term *Orbicula* in the Cuvierian and Lamarckian sense is merely a synonym of *Crania*, we are obliged to adopt the genus *Discina*, proposed and described by Lamarck in 1819. . .'. In a footnote on p. 128 Davidson further noted 'that it would certainly be more convenient, under all circumstances, to prevent confusion, to use *Discina* instead of *Orbicula*, and to suppress altogether the latter name'. In 1871 Dall, in a revision of craniids and discinids, also placed *Orbicula* as a synonym of *Crania*, because *P. anomala* was recognised as a *Crania* species.

9. In the Brachiopoda *Zoological Records* from 1902 there is only one taxonomic reference (Roch, 1930, p. 421) to *Orbicula*, where it is placed in the DISCINACEA. Thus for over fifty years, and virtually for over one hundred years, the name *Orbicula* has been out of use. In the Brachiopod volume of the *Treatise* (Williams *et al.*, 1965, H290) it appears as a junior synonym of *Crania*, but nowhere, so far as we can determine, as a valid name in its own right.

10. To reintroduce *Orbicula* for a craniid brachiopod, when it was so widely accepted as a discinid, would further exacerbate the 'confusion of forms existing in this unfortunate family' (Dall, 1871, p. 38, referring to the DISCINIDAE). We believe that zoologists and palaeontologists would find it hard to accept that *Orbicula* be reintroduced as a craniid genus.

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the generic name *Orbicula* Cuvier, 1798, and any emendations, for the purpose of the Principle of Priority.

- (2) to place on the Official Index of Rejected and Invalid Generic names in Zoology the name *Orbicula* Cuvier, 1798, as suppressed under the plenary powers in (1) above.

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